

PATENT
213/001-CIP

ABSTRACT

SUGAR MODIFIED NUCLEOSIDES AND THEIR USE FOR
SYNTHESIS OF OLIGONUCLEOTIDES

5 A number of modified nucleosides are disclosed composed
of modified sugar moieties which contain substituents at C1
and C4 positions, or branched substituents at C3 and C5
positions of deoxyribose or ribose. Each nucleoside is
converted to or properly protected and then converted to the
10 corresponding phosphoramidites. These phosphoramidites are
used to assemble oligonucleotides in which there is at least
one of the forenoted nucleosides. These sugar modified oligo-
nucleotides have the potential to be used as antisense
therapies since they are expected to enhance nuclease
15 resistance and cellular uptake while they maintain sequence-
specificity and affinity to nucleic acid targets *in vitro* or
in vivo.

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